ABSTRACT

A method of modeling or constructing a switch element uses an ingress stage with input sorters and input routers; an egress stage with output routers and output sorters; and a center stage interconnecting the ingress and egress stages. Routers are partitioned such that each partition is assigned to only one data line. A switch controller and method may use such modeling to advantage. For example, during initial configuration of the switch element, a subset of connections are excluded from a control algorithm that initially configures the switch with the subset being subjected to post processing. Furthermore, a fast rearrangement of the switch rearranges only part of the existing connections and then adds/deletes cross connects as necessary to complete the connections.